

Calendar

Wednesday, January 12

11:00 a.m. Fermilab ILC R&D Meeting - 1 West

Speaker: W. Cooper, Fermilab

Title: A Silicon Tracker for ILC

12:00 p.m. Wellness Works – Brown Bag Seminar - Curia II

Speaker: W. Hallow, Midwest Center for Sleep Disorders

Title: Getting a Better Night's Sleep

2:30 p.m. Proton Driver Meeting - One West

3:30 p.m. DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

4:00 p.m. Fermilab Colloquium - 1 West

Speaker: J. Kakalios, University of Minnesota

Title: The Uncanny Physics of Superhero Comic Books

Thursday, January 13

2:30 p.m. Theoretical Physics Seminar - Curia II

Speaker: H. Davoudiasl, University of Wisconsin

Title: Neutrino Masses from Sub-GeV Dynamics in Low-Cutoff-Scale Models

3:30 p.m. DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

4:00 p.m. Accelerator Physics and Technology Seminar - 1 West

Speaker: D. Seidman, Northwestern University

Title: Atom-Probe Tomography as a Tool for Solving Materials, Science and Engineering Problems

Wilson Hall Cafe

Undergraduate Program Prepares For Summer Interns



Undergraduate students from the 2001 Summer Physics Internship Program celebrate a birthday with a home-made cake and liquid nitrogen. (Click on image for larger version.)

Every year, the [Internships for Physics Majors Program](#) draws more than 100 applications from stellar undergraduate physics students from around the world, out of which only about 10 will get accepted to the summer program.

"We get to pick some of the most outstanding physics students in the world," said Roger Dixon of Fermilab's Accelerator Division, who runs the program together with Erik Ramberg. "Since we have so many outstanding students to choose from, we also get a lot of diversity in the group. We have undergrads of every class rank, students from small universities working alongside students from big name universities, and they all learn from each other."

Ramberg, of Fermilab's Particle Physics Division, said that his own undergrad internship at SLAC convinced him to become a particle physicist. "We try to get them jobs that are really research-



A physicist tests apparatus for Fermilab's proposed BTeV experiment. (Click on image for larger version.)

Through the Eyes of a Photographer

Last summer, German photographer Peter Ginter spent ten days at Fermilab, carrying out photo shoots at about 25 locations across the lab. His best photos, digitally enhanced by Ginter himself, are now available on a Fermilab Web site. From the Main Injector to the MINOS experiment, from the Feynman Computing Center to the BTeV prototype detector, Ginter has managed to capture Fermilab in new light and colors.

From sunrise to sunset, Ginter took photos around the clock, whenever the conditions were right and safe access to experiments and accelerators

was possible. Using film and a wide-angle lens, Ginter took numerous photos of the same scene with different exposures and under different lighting conditions.

Occasionally, he used colorful light to enhance the surface of an object or to create shadows and contrast. Using tape, he made sure that all photos of a



Peter Ginter

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French Onion Soup

Texas Style Meatloaf Sandwich \$4.75

Grilled Chicken with Black Bean & Corn

Salsa \$3.75

Kielbasa & Sauerkraut \$3.75

Three Cheese & Tomato Panini \$4.75

Sausage & Pepperoni Combo \$2.75

Fettucine Carbonara with Ham &

Mushrooms \$4.75

[Wilson Hall Cafe Menu](#)

[Chez Leon](#) will be closed through January and February

Weather



Thunderstorms 54°/28°

[Extended Forecast](#)

[Weather at Fermilab](#)

Current Security Status

[Secon Level 3](#)

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oriented rather than repetitive tasks," he said. "Finding these jobs is difficult because mentors have to train them -- 50-75% of the students' time is spent in training. You have to have mentors that are really dedicated to teaching and training. Luckily, we have a lot of those."

Maxine Hronek of Fermilab's Particle Physics Division, who coordinates the program, said that 2005 will be the second year that Fermilab can hire additional interns through the SULI program, which has funding provided by the DOE. "These are all bright, brilliant, enthusiastic students," she said, "and this opportunity is something they value for a long time. In addition to learning physics, they also get to meet people and create job relations, which will ultimately benefit the physics field overall."

If you would like to help with the program or become a mentor, contact [Maxine Hronek](#). The deadline to apply for the internship program is February 1.

In the News

SDSS Press Release, January 11, 2005

The Cosmic Yardstick

Sloan Digital Sky Survey astronomers measure role of dark matter, dark energy and gravity in the distribution of galaxies
SAN DIEGO (January 11, 2005) -- In the largest galaxy survey ever, the Sloan Digital Sky Survey (SDSS) confirmed the role of gravity in growing structures in the universe, using the result to precisely measure the geometry of the universe.

The SDSS researchers from the University of Arizona, New York University, the University of Portsmouth

particular scene were taken from the same position. Back in his lab, he processed the photos digitally, combined several photos of a single scene, and added color as well as special effects to create pieces of art.

Over the course of Ginter's visit, numerous employees contributed to the photos, some as "models" and many more behind the scenes. From providing access to removing equipment to driving fire trucks around the Booster for a time-lapse photo, a large number of employees helped Ginter to obtain the best possible photos. The effort has paid off. Here are the [forty images](#) that Ginter created of Fermilab. Point at the images to read a caption. Click on the images to view a larger version.

To use the images in publications or posters, please contact [Elizabeth Clements](#) at the Office of Public Affairs. High-resolution files of the images are available. All reprints must be credited to Peter Ginter.

To view the series of photos that Ginter took at [SLAC](#), please click here.

Announcements

Weekly Fermilab Proton Driver Meeting

There will be a weekly Fermilab Proton Driver meeting commencing on Wednesday, January 12, 2005 in WH 1-West from 2:30 pm - 3:30 pm. The agenda for these meetings will include topics related to the 8 GeV Superconducting Linac design and particle physics which can be done with high power proton beams. If you would like to receive meeting announcements in the future via e-mail please reply to

(UK), the University of Pittsburgh and the Massachusetts Institute of Technology, detected ripples in the galaxy distribution made by sound waves generated soon after the Big Bang.

"These sound waves left their imprint in the Cosmic Microwave Background, remnant radiation from the Big Bang seen when the universe was 400,000 years old. We are now seeing the corresponding cosmic ripples in the SDSS galaxy maps. Seeing the same ripples in the early universe and the relatively nearby galaxies is smoking-gun evidence that the distribution of galaxies today grew via gravity," explains lead investigator Daniel Eisenstein of the University of Arizona.

[read more](#)

mbruce@fnal.gov. Here is an agenda for Wednesday's meeting:

Proton Driver Linac Parameters; Status of Design and Plans - Bill Foster - 30 minutes

Fundamental Physics Topics for High Power Proton Beams - Steve Geer - 30 minutes

Fermilab Barnstormers Meeting this Wednesday

The Fermilab Barnstormers, Model Aeronautic Club, will have its meeting this Wednesday at 5:30 p.m. at the Users' Center Music Room. Meetings are held on the second Wednesday of each month. Current members fly R/C gas planes, electric planes, control line planes, and helicopters.

[more information](#)

International Folk Dancing

International Folk Dancing will be held at 7:30 p.m. Thursday, January 13, at the Geneva American Legion Post. Info at 630-584-0825 or 630-840-8194 or folkdance@fnal.gov.

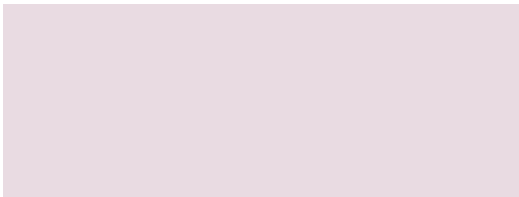
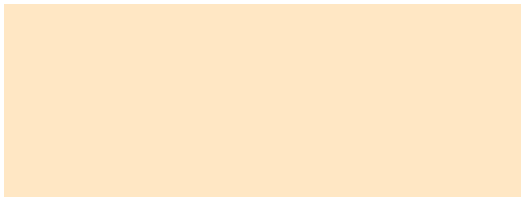
Smuckers Stars on Ice - Discount Tickets

Fermilab's Recreation Office is offering discount tickets to Smuckers Stars on Ice. The deadline to sign up is January 19. The show is on Saturday, February 5, 2005 at 7:30 p.m. at the Allstate Arena.

[more information](#)

When Irish Cows Are Smiling - Discount Tickets

Fermilab's Recreation Office is offering discount tickets for "When Irish Cows are Smiling." The deadline to sign up is March 3. Dinner and the show are on March 19, 2005 at 7:00 PM at the Milk Pail Restaurant.



[more information](#)

[Upcoming Activities](#)